

THIS REPORT CONTAINS ASSESSMENTS OF COMMODITY AND TRADE ISSUES MADE BY USDA STAFF AND NOT NECESSARILY STATEMENTS OF OFFICIAL U.S. GOVERNMENT POLICY

Voluntary _ Public

Date: 8/6/2018

GAIN Report Number: MO1838

Morocco

Post: Rabat

Lists of Undesirable Substances and Limited Uses of Feed Ingredients

Report Categories:

Grain and Feed

FAIRS Subject Report

Sanitary/Phytosanitary/Food Safety

Livestock and Products

SP2 - Prevent or Resolve Barriers to Trade that Hinder

U.S. Food and Agricultural Exports

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Report Highlights:

This report contains an unofficial translation of MinAg Order No. 1490-13, fixing the list and the maximum levels of undesirable substances in animal feed as well as the list and the limits of use of additives, premixes, and supplements intended for animal feed. The measure was previously notified to the WTO as G/SPS/N/MAR/36 and G/SPS/N/MAR/37, noting Morocco's intention to bring their regulations into conformity with Europe.

Order of the Minister of Agriculture and Maritime Fisheries No. 1490-13 of Jumada II 22, 1434 (May 3, 2013) fixing the list and the maximum levels of the undesirable substances in animal feed as well as the list and the limits of use of additives, premixes and supplements intended for animal feed.

(BO. n° 6184 of September 05, 2013, page 2297)

The Minister of Agriculture and Maritime Fisheries,

Having regard to <u>Decree No. 2-10-473 of the Chaoual 7, 1432 (September 6, 2011) adopted for the application of certain provisions of the Law No. 28-07 relating to the safety of food products, in particular 2) and 4) of article 54,</u>

Order:

First Article. - For the purposes of this Order, means by "undesirable substance", any substance or any product, other than pathogens, that is in or on the feed product and that poses a potential risk for animal or human health or the environment or is likely to adversely affect livestock production.

Article 2. - In accordance with 2) in article 54 of the above-mentioned Decree No. 2-10-473, feedstuffs produced domestically, imported or intended for export must not contain undesirable substances listed in accordance with Annex I to this Order exceeding the maximum levels mentioned in the said list.

For substances not referred to in the above-mentioned list and which are considered by *Codex Alimentarius* as undesirable substances, their presence in feedstuffs produced domestically, imported or intended for export must not exceed limits provided for by *Codex Alimentarius*.

Article 3. - In accordance with 4) in article 54 of the above-mentioned Decree No. 2-10-473, animal feed must not contain additives, premixes, compound feed, and feed supplements not listed on the list set out in Annex II of this Order or exceeding the limits mentioned in the said list.

Article 4. - This Order will be published in the Official Gazette.

Rabat, Journada II 22, 1434 (May 3, 2013) The Minister of Agriculture and Maritime Fisheries, AZIZ AKHANNOUCH

 $\label{eq:annex} \textbf{ANNEX} \; \textbf{I}$ Setting the list of the undesirable substances and their maximum levels in animal feed

| Substances | Products intended for animal feed | Max limit in mg/kg (ppm) of feed @ 12% moisture |
|--|---|---|
| I- MYCOTOXINS | | |
| 1 Aflatoxin B1 | Raw material for animal feed | 0.02 |
| | Complementary and compound feed, | 0.01 |
| | except: | 0.005 |
| | - Compound feed for dairy cattle and calves, dairy sheep and lambs, dairy goats and kids, piglets and young poultry animals, | 0.02 |
| 2. Rye ergot (Claviceps purpurea) | Feed material and compound feed | 1 000 |
| II- ENDOGENOUS TOXINS OF PLANTS | containing unamound consols | |
| 1. Free Gossypol | Raw material for animal feed, except: | 20 |
| | - Cottonseed, | 5 000 |
| | - Cottonseed meal and cottonseed | 1 200 |
| | flour. | 20 |
| | Compound feed, except: | 500 |
| | - Compound feed for bovines | |
| | (except calves), | 300 |
| | - Compound feed for sheep (except | 100 |
| | lambs) and goats (except kids), | 100 |
| 2 Hydrocyanic acid | Raw material for animal feed, except: | 60 50 |
| | - Flaxseed | |
| | | 250 |
| | - Flax meal | 350 |
| | - Manioc products and almond meal. | 100 |
| | Compound feed, except: | 50 |
| | - Compound feed for young chickens (< 6 weeks). | 10 |
| 3 Theobromine | Compound feed, except: | 300 |
| | - Compound feed for pigs, | 200 |
| | - Compound feed for dogs, rabbits, horses and fur-bearing animals. | 50 |
| 4. Vinylthiooxazoli-done (5-viny-loxazolidine-2- | Compound feed for poultry, <i>except</i> : | 1 000 |
| thione) | - Compound feed for laying hens. | 500 |
| 5. Volatile mustard oil (1) | Raw material for animal feed, except: | 100 |
| | | 4 000 |
| | - Rapeseed meal. | 150 |
| | Compound feed, except: | 1 000 |
| | - Compound feed for bovines | |
| | (except calves), sheep (except | 500 |
| | lamb) and goats (except kids), | |
| | - Compound feed for pigs (except | |
| | piglets) and poultry. | |
| (1) The maximum levels are expressed as allyl isotl | niocyanate. | |
| III- HARMFUL BOTANICAL IMPURITIES | | |
| Weed seeds and unground and uncrushed fruits containing alkaloids, glucosides or other toxic substances separately or in combination including | Raw material for animal feed and compound feed. | 3 000 |
| _ | | |
| - Datura sp. | | |

| 2. Crotalaria spp. | Raw material for animal feed and | 100 |
|--|---|--|
| 3. Seeds and husks from <i>Ricinus communis</i> L., <i>Croton tiglium</i> L. and <i>Abrus precatorius</i> L. as well as their processed derivatives, separately or in combination <i>Croton tiglium</i> L. and <i>Abrus precatorius</i> L. as well as their processed derivatives(¹), separately or in combination. | Raw material for animal feed and compound feed. | 10 (²) |
| 4. Unhusked beech mast - Fagus sylvatica L. | Raw material for animal feed and | Seeds and fruit of the plant |
| 5. Purgere - Jatropha curcas L. | compound feed. | species listed opposite as well as their processed derivatives |
| 6. Indian mustard - <i>Brassica juncea</i> (L.) Czern. and Coss. ssp. <i>integrifolia</i> (West.) Thell. | | may only be present in feed in trace amounts not |
| 7. Sarepte – mustard <i>Brassica juncea</i> (L.) Czern. and Coss. ssp. <i>juncea</i> . | | quantitatively determinable. |
| 8. Chinese mustard - <i>Brassica juncea</i> (L.) Czern. and Coss. ssp. <i>Juncea</i> var. <i>lutea</i> Batalin | | |
| 9. Black mustard - Brassica nigra (L.) Koch | | |
| 10. Abyssinian mustard (from Ethiopia)- <i>Brassica</i> carinata A. Braun | | |
| 11. Seeds of <i>Ambrosia</i> spp. | Raw material for animal feed, except: | 50 |
| | | 200 |
| | - Millet (grains of Panicum | |
| | miliaceum L.) and sorghum (grains of Sorghum bicolor (L) Moench | 50 |
| (¹) In so far determinable by analytical microscopy. (²) Includes also seed husk fragments. | at that directly too to animals | |

ANNEX II Fixing the limits of use of additives, premixes, and supplements allowed in animal feed

| Additive | Composition, chemical | Species | Max | Min | Max limit | Other provisions |
|--|---|--------------------------|-----|---|-----------------------------|---|
| | formula, description | or animal category | age | limit (mg/kg com- pound feed) | (mg/kg compound feed) | |
| BINDING, ANTI-CAKING | | | 5 | | | |
| Citric acid | $C_6H_8O_7$ | All | - | - | - | |
| Sodium, potassium and calcium stearates | $C_{18}H_{35}O_2Na$ $C_{18}H_{35}O_2K$ $C_{36}H_70O_4Ca$ | All (id) | - | - | - | |
| Silicic acid, rushed and dried | - | All | - | - | - | |
| Colloidal silica | - | All | - | - | - | |
| Silicate of sodium and aluminum, synthetic | - | All | - | - | - | |
| Bentonite - montmorillonite | | All | - | - | 20,000 | All animal feed. Mixture with additives from the groups of "antibiotics", "growth factors", "coccidiostats and other medicinal substances" is prohibited except in the case of: monensin-sodium, narasin, lasalocid-sodium, flavophospholipol, salinomycin sodium, nicarbazin and robenidine. Indication on the label of the specific name of the additive. |
| Vermiculite | Natural silicate of magnesium, aluminum and iron, expanded by heat, asbestos-free | All | - | - | - | All feed |
| Sepiolite | Silicate of hydrated magnesium of sedimentary origin containing at least 60% sepiolite and maximum 30% montmorillonite, asbestos-free | All | - | - | 20,000 | All feed |
| Sepiolitic clay | Silicate of hydrated magnesium of sedimentary origin containing at least 40% sepiolite and 25% illite, asbestos-free | All | - | - | 20,000 | All feed |

| Additive | Composition, chemical formula, description | Species or animal category | Max age | Min limit (mg/kg com- pound feed) | Max limit (mg/kg compound feed) | Other provisions |
|---|--|-------------------------------------|------------|--|--|---|
| Natrolite-phonolite | Natural mixture of aluminum silicates, alkalines and alkaline-earth and aluminum hydrosilicates, natrolite (43-46.5%) and feldspar | All | - | - | 25,000 | All feed |
| Clinoptilolite of sedimentary origin | Hydrated calcium aluminosilicate of | Pigs for fattening | - | - | | All feed |
| , , | clinoptilolite and | Chickens for fattening | - | - | 20,000 | Chickens for fattening |
| | maximum 20% clay minerals, free of fibers and quartz | Turkeys for fattening | - | - | 20,000 | Turkeys for fattening |
| | • | Bovines | - | - | 20,000 | Bovines |
| | | Salmon | - | - | 20,000 | Salmon |
| EMULSIFIERS, STABIL | | | LLIN | G AGEN | | |
| Lecithin | - | All | - | - 1 | - | All feed |
| Propylene glycol alginate (1,2- propanediol alginate) | - | All | - | - | - | All feed |
| Xanthan gum | - | All | - | - | - | All feed |
| Sorbitol | - | All | - | - | - | All feed |
| Mannitol | - | All | - | - | - | All feed |
| Glyceryl polyethylene glycol ricinoleate | - | All | - | - | - | All feed |
| PRESERVATIVES | | | | | | |
| Sorbic acid | $C_6H_8O_2$ | All | - | - | - | All feed |
| Formic acid | CH ₂ O ₂ | All (id) | - | - | - | Indicate in the instructions for use: "It is prohibited to use formic acid alone or when it forms more than 50% by weight of the mixture with other acids for aerobic acid preservation of raw cereals with a high moisture content." |
| Sodium formate | CHO ₂ Na | All | - | - | <u>-</u> | All feed |
| Calcium formate Acetic acid | C ₂ H ₂ O ₄ Ca | All All | - | - | - | All feed All feed |
| Acetic acid Acetic acid | $C_2H_4O_2$ $C_2H_4O_2$ | All | - | - | - | All feed |
| Calcium acetate | $C_2H_4O_2$ $C_4H_6O_4Ca$ | All | _ | _ | <u>-</u> | All feed |
| Lactic acid | $C_3H_6O_3$ | All | _ | _ | | All feed |
| Propionic acid | $C_3H_6O_2$ | All | - | - | - | All feed |
| Sodium propionate | $C_3H_5O_2Na$ | All | - | _ | _ | All feed |
| Calcium propionate | $C_6H_{10}O_4Ca$ | All | - | - | - | All feed |
| Ammonium propionate | $C_3H_9O_2N$ | All | - | - | - | All feed |
| Ammonium formate | CH ₅ O ₂ N | All | - | - | - | All feed |
| Ammonium formate | CH ₅ O ₂ N | All | - | - | - | All feed |
| Fumaric acid Citric acid | $C_4H_4O_4$ $C_6H_8O_7$ | All All | - | - | - | All feed All feed |

| Additive | Composition, chemical formula, description | Species or animal category | Max age | Min limit (mg/kg com- pound feed) | Max limit (mg/kg compound feed) | Other provisions |
|------------------------------|--|-------------------------------------|------------|--|--|---|
| Acid orthopho-sphoriq ue | H_3PO_4 | All | - | - | - | All feed |
| Propyl gallate | $C_{10}H_{12}O_5$ | All | - | - | 100 alone or together with E311 or E312 | All feed |
| Butylhydroxyanisol (BHA) | | All except dogs | - | - | 150 alone or together with E321 and/or E324 | All feed |
| Butylhydroxytoluene (BHT) | | All except dogs | - | - | 150 alone or together with E320 and/or E324 | All feed |
| Ethoxyquin | | All except dogs | - | - | 100 alone or together with E320 or E321 | All feed |
| VITAMINS | | | | | | |
| Vitamin A | | Chickens for fattening | - | - | 13,500 | All feed except for young animals |
| | | Ducks for fattening | - | - | 13,500 | All feed except for young animals |
| | | Turkeys for fattening | - | - | 13,500 | All feed except for young animals |
| | | Lambs for fattening | - | - | 13,500 | All feed except for young animals |
| | | Pigs for fattening | - | - | 13,500 | All feed except for young animals |
| | | Bovines for fattening | - | - | 13,500 | All feed except for young animals |
| | | Calves for fattening | - | - | 25,000 | Replacers only |
| | | Other | - | - | - | All feed |
| Vitamin D ₂ | - | Pigs | - | - | 2,000 | Simultaneous administration with vitamin D ₃ prohibited |
| | | Piglets | - | - | 10,000 | Replacers only Simultaneous administration with vitamin D ₃ prohibited |
| | | Bovine | - | - | 4,000 | Simultaneous administration with vitamin D ₃ prohibited |
| | | Sheep | - | - | 4,000 | Simultaneous administration with vitamin D ₃ prohibited |
| | | Calves | - | - | 10,000 | Replacers only Simultaneous administration with vitamin D ₃ prohibited |

| Additive | Composition, chemical | Species | Max | Min | Max limit | Other provisions |
|-----------------------------------|-----------------------|-----------|-----|--------|-----------|---|
| | formula, description | or | age | limit | (mg/kg | F-0.7-22-22 |
| | _ | animal | | (mg/kg | compound | |
| | | category | | com- | feed) | |
| | | | | pound | | |
| | | | | feed) | | |
| | | Equine | - | - | 4,000 | Simultaneous |
| | | | | | | administration with vitamin |
| W | | ъ : | | | 4.000 | D ₃ prohibited |
| Vitamin D3 | = | Bovine | - | - | 4,000 | Simultaneous |
| | | | | | | administration with vitamin |
| | | Diag | _ | | 2,000 | D ₂ prohibited Simultaneous |
| | | Pigs | _ | - | 2,000 | administration with vitamin |
| | | | | | | D ₂ prohibited |
| | | Sheep | _ | _ | 4,000 | Simultaneous |
| | | ысер | | | 4,000 | administration with vitamin |
| | | | | | | D ₂ prohibited |
| | | Calves | _ | _ | 10,000 | Simultaneous |
| | | Carves | | | 10,000 | administration with vitamin |
| | | | | | | D ₂ prohibited |
| | | Equine | - | - | 4,000 | Simultaneous |
| | | 1 | | | , | administration with vitamin |
| | | | | | | D ₂ prohibited |
| | | Chicken | - | - | 5,000 | Simultaneous |
| | | for | | | | administration with vitamin |
| | | fattening | | | | D ₂ prohibited |
| | | Turkeys | - | - | 5,000 | Simultaneous |
| | | | | | | administration with vitamin |
| | | | | | | D ₂ prohibited |
| Vitamin K | - | All | - | - | - | All feed |
| Vitamin B1- | - | All | - | - | - | All feed |
| Thiamine hydrochloride | | A 11 | | | | A11 C 1 |
| Vitamin B1 - Thiamine mononitrate | - | All | - | - | - | All feed |
| Vitamin B2 - Riboflavin | | All | | | | All feed |
| Vitamin B2 - Riboflavin- | = | All | - | - | - | All feed |
| 5'-phosphate ester | - | AII | _ | - | - | All leed |
| monosodium salt | | | | | | |
| Vitamin C – | _ | All | - | _ | - | All feed |
| L-ascorbic acid | | 1 111 | | | | |
| Vitamin C- | _ | All | - | _ | _ | All feed |
| Sodium L-ascorbate | | | | | | |
| Vitamin C - | = | All | - | - | = | All feed |
| Calcium L-ascorbate | | | | | | |
| Vitamin C- | - | All | - | - | - | All feed |
| 6-palmityl-L-ascorbic acid | | | | | | |
| Pantothenic acid | - | All | - | - | - | All feed |
| - D- pantothenate of | | | | | | |
| calcium | | | | | | |
| Pantothenic acid | - | All | - | - | - | All feed |
| - D-panthenol | | | | | | |
| Nicotinic Acid | - | All | - | - | - | All feed |
| (niacin) | | | | | | 411.0 |
| Nicotinic Acid | - | All | - | - | - | All feed |
| - Acid Amide | | | | | | |
| (nicotinamide- | | | | | | |
| niacinamide(NA)) | | A 11 | | | | All food |
| Folic acid | - | All | - | - | - | All feed |
| Para-amino acid | - | All | - | - | - | All feed |

| Additive | Composition, chemical formula, description | Species or animal category | Max age | Min limit (mg/kg com- | Max limit (mg/kg compound feed) | Other provisions |
|---------------------------------------|--|-------------------------------------|------------|--------------------------------|--|---|
| | | category | | pound feed) | icca) | |
| Benzoic (pABA) | | | | rccu) | | |
| Biotin- | _ | All | _ | _ | _ | All feed |
| D-(+) - biotin | | | | | | in recu |
| Carnitine – L-carnitine | - | All | - | - | - | All feed |
| Carnitine | | | | | | |
| Betaine | - | All | - | - | - | All feed |
| 25-hydroxy-cholecalciferol | C ₂₇ H ₄₄ O ₂ .H ₂ O | Chickens for fattening | - | - | 0.100 | Additive shall be incorporated in feed via the use of a premix. Maximum quantity of the combination of 25- |
| | | | | | | hydroxycholecalcif-erol |
| | | Turkeys | _ | | 0.100 | and vitamin D3 |
| | | for | | | 0.100 | (cholecalciferol) per kg of |
| | | fattening | | | | compound feed: |
| | | | | | | \leq 0.125 mg (136) |
| | | | | | | (equivalent to 5,000 IU of vitamin D3) for chickens |
| | | Other | | | 0.080 | for fattening and turkeys |
| | | poultry | | | 0.080 | for fattening. |
| | | pourity | | | | ≤ 0.080 mg for the |
| | | | | | | remaining poultry, |
| | | | | | | ≤ 0.050 mg for pigs. |
| | | | | | | 3. The simultaneous use of |
| | | | | | | vitamin D2 is not allowed. |
| | | | | | | 4. Ethoxyquin content to be indicated on the label |
| | | | | | | 5. Safety measure: wear respiratory protection. |
| Vitamin E / | $C_{31}H_5O_3$ | All | - | - | - | - |
| RRR-alpha-tocopheryl | | | | | | |
| acetate | | | | | | |
| 1 2 | C8H11NO3.HCl | All | - | - | - | - |
| hydrochloride | | | | | | |
| OLIGO ELEMENTS Ferrous carbonate | FeCO ₃ | All | _ | - | | |
| | FeC12.4H2O | All | - | | G1 7 00 | |
| tetrahydrate | 1 C12.7112O | 111 | _ | _ | Sheep: 500 (total) | |
| | FeC1 ₃ H 4 ₂ O | All | - | - | (totai) | |
| hexahydrate | | | | | | |
| Ferrous citrate, hexahydrate | $Fe_3(C_6H_5O_7))_26H_2O$ | All | - | - | Pets: 1250 | |
| | FeC ₄ H ₂ O ₄ | All | - | - | (total) | |
| | $Fe(C_3H_5O_3))_2.3 H_2$ | All | - | - | | |
| | Fe ₂ O ₃ | All | - | | Piglets up to | |
| * | FeSO ₄ H ₂ O | All | - | | one week | |
| monohydrate Ferrous sulfate, | FeSO.7H ₂ O | All | _ | | before weaning: 250 | |
| heptahydrate | 1 650.71120 | 7311 | _ | | mg/day | |
| | $(Fe(x)_{1-3} nH_2O)$ | All | - | - | | |
| of amino acid, hydrated | | | | | Other: 750 | |
| Chelated ferrous glycine, hydrated | Fe(x) $_{1-3}$.nH ₂ O (x = anion synthetic | All | - | - | (total) | |
| | glycine) | | | | | |

| Additive | Composition, chemical formula, description | or animal category | Max age | Min limit (mg/kg com- pound feed) | Max limit (mg/kg compound feed) | Other provisions |
|--|--|--------------------------|------------|--|--|------------------|
| Calcium iodate, hexahydrate | $Ca(IO_3))_26H_2O$ | All | - | - | Equine: 4 (total) | |
| | $Ca(IO_3))_2$ | All | - | - | Fish: 20 (total) | |
| Sodium iodure | NaI | All | - | - | Dairy cows | |
| Potassium iodure | KI | All | - | - | and laying hens: 5 (total) Other: 10 (total) | |
| Cobalt chloride, hexahydrate | CoCI ₂ 6 H ₂ O | All | - | - | | |
| Cobalt sulfate, heptahydrate | CoSO.7H ₂ O | All | - | - | All: 2 (total) | |
| Cobalt sulfate, monohydrate | CoSO _{4.} H ₂ O | All | - | - | | |
| | Cu(C5H10NO2S) ₂ | All | - | - | Bovines: 1. Prior to rumination: - milk replacers: | |
| Cupric oxide | CuO | All | - | - | 15 (total) - other compound feeds: 15 | |
| Cupric sulphate, pentahydrate | CuSO ₄ .5H ₂ O | All | - | - | (total) 2. Other: 35 (total) | |
| acids hydrate | Cu $(x)_{1-3}$ nH ₂ O (x = anion of any amino acid derived from soybean protein hydrolyzed) Molecular weight less than 1,500 | All | - | - | Sheep: 15 (total) Fish: 25 (total) Crustaceans: 50 (total) Other: 25 (total) | |
| Chelated copper of glycine, hydrated | $Cu(x)_{1-3}$ nH_2O (x = anion synthetic glycine) | All | - | - | | |
| Manganeux carbonate | $MnCO_3$ | All | - | - | Fish: 100 | |
| Manganese chloride, tetrahydrate | MnCl ₂ .4H ₂ O | All | - | - | (total) | |
| Acid manganese phosphate, trihydrate | MnHPO _{4.} 3H ₂ O | All | - | - | Other: 150 | |
| Manganous oxide | MnO | All | - | - | (total) | |
| Manganese sulfate of amino acids hydrate | | All | - | - | | |
| Zinc oxide | ZnO | All | - | - | | |
| Zinc sulfate | ZnS | All | - | - | 150 (1.15) | |
| Zinc chelate of amino acids hydrate | | All | - | - | 150 (total) | |
| Molybdate of ammonium (NH ₄) | Mo ₇ O ₂₄ .4H ₂ O6 | All | - | - | | |
| Sodium Selenite | Na ₂ SeO | All | - | - | | |

| Additive | Composition, chemical formula, description | or animal category | Max age | limit (mg/kg com- pound feed) | Max limit (mg/kg compound feed) | Other provisions |
|--|--|------------------------------|------------|---|--|---|
| Selenomethionine | Selenomethionine produced by Saccharomyces cerevisiae CNCM I-3399 (Selenized yeast inactivated) | All | | | 0.50 (total) | Additive shall be incorporated in feed as a premix. For safety of the users: wearing a respiratory protection, goggles and safety gloves during handling. |
| AMINO ACIDS, THEIR S | SALTS AND ANALOGU | UES | | | | |
| DL-methionine | CH ₃ S(CH ₂) ₂ - CH(NH ₂) -COOH | All | - | - | - | - |
| L - lysine | | All | - | - | - | - |
| L - threonine | CH(NH ₂)- COOH | All | - | - | - | - |
| L - tryptophan | CH(NH ₂)- COOH | All | - | - | - | - |
| Methionine hydroxyl analogue | CH ₃ S(CH ₂) ₂ -CH (OH) - COOH | | - | - | - | - |
| L-Histidine mono- hydrochloride monohydrate | - COOH · HCl ·H ₂ O | All | - | - | - | - |
| ZOOTECHNICAL ADDI | | | | | | |
| 6 - phytase | 1 | for fattening | - | - | 1,500 FYT | - |
| | | Poultry for laying | | - | 600 FYT | - |
| 3 - phytase | Preparation of 3-phytase produced by Aspergillus niger (CBS) | Piglets Chickens | 2 month | 500 FTU 375 | - | 1. In the mode of use of the additive and the premix, indicate the storage life and |
| | 114.94) | for fattening | - | FTU | - | stability in pelleting. 2. Recommended dose per |
| | | Chickens for laying | - | 250 FTU | - | kg of compound feed: 500 FTU. |
| | | Turkeys for fattening | - | 250 FTU | 1 | 3. To use in compound feed containing more than 0.23% phytin bound phosphorus. |
| Endo-1, 4-β-xylanase | EC 3.2.1.8 produced by | Chickens for fattening | - | - | 250 FTU | - |
| Endo-1,4-β-glucanase | Preparation of endo- 1,4-beta-glucanase produced by <i>Bacillus</i> <i>subtilis</i> (IMI SD 142) | Chickens for fattening | - | 500 CU | - | 1. Recommended dose per kg of compound feed: 500-1,000 CU. 2. To be used in compound feed rich in non-starch polysaccharides (mainly beta-glucans), e.g. containing more than 40% barley. |
| COCCIDIOSTAT GROW | | | | | | |
| Decoquinate 60.6 g/kg | $C_{24}H_{35}O_5$ | Chickens for | - | 20 | 40 | Administration banned 3 days at least before the |

| Additive | Composition, chemical formula, description | Species or animal category | Max age | Min limit (mg/kg com- pound feed) | Max limit (mg/kg compound feed) | Other provisions |
|---------------------------------|---|-------------------------------------|-------------|--|--|---|
| | | fattening | | | | slaughter. Mention this requirement on compound feed labels. |
| Monensin-sodium | C ₃₆ H ₆₁ O ₁₁ Na | Chickens for fattening | - | 100 | 125 | Administration banned a day before the slaughter. Indicate in the requirement |
| | | Chickens for laying | 16 weeks | 100 | 120 | for use: «Dangerous for equine.» «This feed contains an ionophore: avoid |
| | | Turkeys | 16 weeks | 60 | 100 | simultaneous administration with tiamulin and monitor for possible adverse reactions when used concurrently with other medicinal substances.» |
| 66g robenidine hydrochloride | C ₁₅ H ₁₃ C ₁₂ N ₅ .HCl, | Chickens for fattening | - | 30 | 36 | Administration banned five days before slaughter. |
| | | Turkeys | - | 30 | 36 | Administration banned five days before slaughter. |
| Lasalocid A sodium | C ₃₄ H ₅₃ O ₈ Na, | Chickens for fattening | - | 75 | 125 | Administration banned five days before slaughter. Mention this requirement on the compound feed labels. |
| | | Chickens for laying | 16 weeks | 75 | 125 | Indicate in the instructions for use: «Dangerous for equine» «This feed contains an additive of the group the ionophores: Simultaneous administration with certain drugs (for example, tiamulin) can be against indications.» |
| Halofuginone | trans-7-bromo-6-chloro- 3-(3-(3-hydroxy-2- piperidyl)-acetonyl)- 4(3H)-quinazolinone | Chickens for fattening | - | 2 | 3 | Administration banned five days before slaughter. Mention this requirement on the compound feed labels. |
| | | Turkeys | 12 weeks | 2 | 3 | Administration banned five days before slaughter. Mention this requirement on the compound feed labels. |

| Additive | Composition, chemical | Species | Max | Min | Max limit | Other provisions |
|----------------------|---|------------------------|-------|----------------|-------------------|--|
| | formula, description | or | age | limit | (mg/kg | |
| | | animal category | | (mg/kg com- | compound feed) | |
| | | category | | pound | icca) | |
| | | | | feed) | | |
| Narasin | C43H72O11 | Chickens | - | 60 | 70 | Mention this requirement |
| | | for fattening | | | | on the compound feed labels. |
| | | ruttening | | | | Indicate in the instructions |
| | | | | | | for use: |
| | | | | | | «Dangerous for equine, |
| | | | | | | turkeys and rabbits. » «This feed contains an |
| | | | | | | additive of the group the |
| | | | | | | ionophores: Simultaneous administration with certain |
| | | | | | | drugs (for example, |
| | | | | | | tiamulin) can be against |
| G 1' ' ' | | C1: 1 | | | | indications.» |
| Salinomycin-sodium | $C_{42}H_{69}O_{11}Na$, | Chickens for | - | 60 | 70 | Administration banned a day before the slaughter. |
| | | fattening | | | | Indicate in the requirement |
| | | | | | | for use: |
| | | | | | | «Dangerous for equine, turkeys.» |
| | | | | | | «This feed contains an |
| | | | | | | additive of the group the |
| | | | | | | ionophores: Simultaneous administration with certain |
| | | | | | | drugs (for example, |
| | | | | | | tiamulin) can be against |
| | | Chickens | 12 | 50 | 50 | indications.» Mention this requirement |
| | | Cnickens for laying | | | 30 | on the compound feed |
| | | | | | | labels. |
| | | | | | | Indicate in the requirement |
| | | | | | | for use: «Dangerous for equine, |
| | | | | | | turkeys.» |
| | | | | | | «This feed contains an |
| | | | | | | additive of the group the ionophores: Simultaneous |
| | | | | | | administration with certain |
| | | | | | | drugs (for example, |
| | | | | | | tiamulin) can be against indications.» |
| Maduramicin ammonium | C ₄₇ H ₈₃ O ₁₇ N | Turkeys | 16 | 5 | 5 | Administration banned five |
| | | | weeks | | | days minimum before the |
| | | | | | | slaughter. Mention this requirement on the |
| | | | | | | compound feed labels. |
| | | | | | | Indicate in the requirement |
| | | | | | | for use: «Dangerous for equine» |
| | | | | | | «This feed contains an |
| | | | | | | additive of the group the |
| | | | | | | ionophores: Simultaneous administration with certain |
| | | | | | | drugs (for example, |
| | | | | | | tiamulin) can be against |

| Additive | Composition, chemical formula, description | Species or animal category | Max age | Min limit (mg/kg com- pound feed) | Max limit (mg/kg compound feed) | Other provisions |
|--|--|-------------------------------------|-------------|--|--|---|
| | | | | | | indications.» |
| Diclazuril | C17H9Cl3N4O2, | Chickens for laying | 16 weeks | 1 | 1 | - |
| | | Rabbits | - | 1 | 1 | Administration banned a day before the slaughter. |
| | | Chickens for fattening | - | 1 | 1 | 1. Additive shall be incorporated in feed as a premix. 2. Do not mix diclazuril with other coccidiostats. 3. Safety measure: wear respiratory protection, goggles and safety gloves during handling. 4. The authorization holder shall plan and execute a surveillance plan for bacterial resistance of <i>Eimeria spp</i> . |
| | | Turkeys for fattening | - | - | - | - |
| Semduramicin sodium | C ₄₅ H ₇₆ O ₁₆ Na | Chickens for fattening | - | 20 | 25 | Banned five days before slaughter. Simultaneous use of semduramicin and tiamulin may induce a temporary reduction of feed and water intake. |
| MICROORGANISMS Saccharomyces cerevisiae. | Preparation of | Bovines | - | 4 x 10 ⁹ | 8 x 10 ⁹ | The storage temperature, |
| | Saccharomyces | for fattening | | | | storage life, and stability to pelleting shall be indicated in the directions for use of the additive, premix, and compound feed. In the directions for use, insert the following statement: «The quantity of Saccharomyces cerevisiae in the daily ration must not exceed 2.5 x 10 ⁹ CFU per 100 kg animal weight and |

| Additive | Composition, chemical formula, description | Species or animal category | Max age | Min limit (mg/kg com- pound feed) | Max limit (mg/kg compound feed) | Other provisions 0.5 x 10 ¹⁰ CFU per additional 100 kg animal weight.» |
|---------------------------------------|---|-------------------------------------|-----------------|--|---|--|
| | | Dairy cows | - | 4 x 10 ⁸ | 2 x 10 ⁹ | The storage temperature, storage life, and stability to pelleting shall be indicated in the directions for use of the additive, premix, and compound feed. The quantity of Saccharomyces cerevisiae in the daily ration must not exceed 5.6 x 10 ⁹ CFU per 100 kg of animal weight. Add 8.75 x 10 ⁹ CFU per additional 100 kg of animal weight. |
| | Saccharomyces cerevisiae content at least: | Bovines for | 6 month - | 2 x 10 ⁸ 1.7 x 10 8 | 2 x 10 ⁹ 1.7 x 10 ⁸ | - |
| | _ | fattening Dairy cows | - | 5 x 10 ⁷ | 3.5 x 10 ⁸ | - |
| Saccharomyces cerevisiae. CNCM I-1077 | Preparation of Saccharomyces cerevisiae content at least: granular powder: 2 x 10 ¹⁰ CFU/g coated: 1 x 10 ¹⁰ CFU/g | Dairy cows | - | 4 x 10 ⁸ | 2 x 10 9 | The storage temperature, storage life, and stability to pelleting shall be indicated in the directions for use of the additive, premix, and compound feed. The quantity of Saccharomyces cerevisiae in the daily ration must not exceed 8.4 x 10 ⁹ CFU per 100 kg of animal weight. Add 1.8 x 10 ⁹ CFU per additional 100 kg of animal weight. |
| | | Bovines for fattening | - | 5 x 10 ⁸ | 1.6 x 10 ⁹ | The storage temperature, storage life, and stability to pelleting shall be indicated in the directions for use of the additive, premix, and compound feed. The quantity of Saccharomyces cerevisiae in the daily ration must not exceed 4.6 x 10 ⁹ CFU per 100 kg of animal weight. Add 2 x 10 ⁹ CFU per additional 100 kg of animal |

| Additive | Composition, chemical formula, description | Species or animal category | age | Min limit (mg/kg com- pound feed) | Max limit (mg/kg compound feed) | Other provisions |
|---|--|-------------------------------------|-----|--|--|---|
| Pediococcus acidilactici CNCM MA 18/5M | Pediococcus acidilactici | Chickens for fattening | - | 1 x 10 ⁹ | 1 x 10 ¹⁰ | weight. The storage temperature, storage life, and stability to pelleting shall be indicated in the directions for use of the additive, premix, and compound feed. Can be used in compound animal feed containing the following authorized cocciodiostats: decoquinate, narasin, halofuginone, salinomycin sodium, maduramycine ammonium, diclazuril. |